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REMARKS

Claims 1- 11 are pending and stand rejected.

Claims 1-6 are withdrawn.

Claim 7 has been amended to more clearly point out that a surface-active additive is a required element of the claim, and that its presence is at a level of less than 300 ppm.

DOUBLE PATENTING

Claims 7-11 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 7-11 of copending Application 10/791,226, and indeed are identical. The claims 7-11 of the copending Application are canceled.

Claims 7-11 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-6 of copending Application 10/791,226. This obviousness-type double patenting rejection is improper, as both the present application and US application 10/791,226 were filed on the same day (March 2, 2004) in the US, and each is based on a French priority document (FR 03.02531 and 03.02532) which were also filed on the same day (March 3, 2003), and therefore neither can be prior art against the other.

Response to the Examiner's arguments in the September 1, 2005 Office Action, and 35 USC §103(a) response:

8. The Examiner is maintaining the previous 35 U.S.C. 103(a) rejection of Claims 7-9 for the reasons set forth in paragraph 13-14 of the office action dated 4-1-2005. Applicant maintains the previous response, and will further remark below.
9. The Examiner is maintaining the previous 35 U.S.C. 103(a) rejection of Claims 10-11 for the reasons set forth in paragraph 16 of the office action dated 4-1-2005. Applicant maintains the previous response, and will further remark below.
10. The Examiner contends that Applicant claims in parent claim 7 an unexpected way of obtaining a PVDF polymer or copolymer comprising a) sodium acetate, b) less than 300 ppm of surface active additive, and c) chain ends as  $-\text{CF}_2-\text{CH}_2-\text{O}-\text{SO}_3^-$  originating from the use of a

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potassium alkylsulphonate. Applicant claims such a process in withdrawn claim 1, however Claim 7 is to a PVDF polymer composition, and not to a process.

12. a) The Examiner states that parent claim 7 has been amended only to clarify the "optional" use relates only to the potassium alkylsulphonate, and not to the required a) PVDF polymer, b) sodium acetate, c) less than 300 ppm of surface-active additive, and d) chain ends of  $-CF_2-CH_2-O-SO_3^-$  originating from the use of the persulphate as initiator. The Examiner is correct, as Applicant believes the claim as amended is both novel and unobvious.
- b) The Examiner states that the '709 reference is silent regarding that the level of surfactant is less than 300 ppm. Applicant strongly disagrees. The '709 never specifically states a range for residual surfactant level. That is because the '709 reference failed to recognize the detrimental effect of excess residual surface-active additive on the heat stability of the PVDF, as discussed by Applicant in the original Specification on page 3, lines 7-8. Since the level of residual surface active agent was not recognized as a result-effective variable in the '709 reference, one of skill in the art would not arrive at Applicant's claims based on the '709 reference by routine experimentation. While the '709 reference does not state a range (since the problem to be solved - heat stability- was not recognized), it clearly describes a process in examples 1, 2, and 3 of adding 0.6 gram (550 ppm), 1.2 gram (1100 ppm) and 2.4 grams (2200ppm) of sodium salt of perfluorooctanoic acid (a surface-active additive), without describing any step for the removal of said surfactant - thus the surfactant remains on the polymer at levels far above the 300 ppm maximum claimed by Applicant. Applicant contends that the examples of the '709 reference clearly teach high levels of surface-active additive, and therefore are not silent, as the Examiner contends. Not only does this '709 surface-active agent teaching not teach or suggest Applicant's claim limitation, but it teaches away from Applicant's claim limitation. One of skill in the art would not be motivated to practice Applicant's claims based on the teaching of '709 which fails to recognize Applicant's solved problem, and teach away from Applicant's claims by teaching only levels of surface-active additive far above those claimed by Applicant.
- c) The Examiner contends that the Sharma, '109 reference could be applied to a PVDF system, citing the general statement in Sharma, column 8, lines 43-43 that the invention can be used to make polymers broadly characterized as ethylenically unsaturated. While the Sharma extensive listing of monomers includes neither vinylidene fluoride nor not even one of the comonomers Applicant lists on page 6, line 26 to page 7, line 5, the Examiner states that Sharma does not

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"rule out" the use of fluorinated monomers. The Examiner also points to a list of comonomers listed in the '709 patent on column 2, lines 21 - 32. None of the comonomers listed in '709 is listed in the extensive '109 list. This total lack of overlap in comonomers is not unexpected to those of skill in the art of fluoropolymers. Fluoromonomers are not typical ethylenically unsaturated monomers, as described in '109, but are quite atypical, and unreactive with few monomers that are not also fluoromonomers. No one in the fluoropolymer art would be motivated by a teaching of typical non-fluorinated monomers (as in '109) to practice fluoropolymers as claimed by Applicant. At the very least a teaching of a vast number of monomers applicable to the '109 teaching that is completely void of VDF and any of the comonomers listed in Applicant's specification teaches away from Applicant's claims. The '109 reference is not merely "silent" on fluoropolymers, but VDF, fluoropolymers and comonomers polymerizable with them are very noticeable absent from the '109 invention - which only teaches away from Applicant's required claim limitations.

Further, the '109 teaches condensation polymers while Applicant's claim requires a persulphate free-radical polymer initiator. Not only does this fail to teach Applicant's claim limitations, but again this teaches away from Applicant's claims.

Further the '109 application teaches a "surfactantless" system, while Applicant's claims require a surface active additive to be used at less than 300 ppm.

12. The Examiner concludes that

- a) "in light of the fact that the copolymers produced by all references contain similar non-fluorinated monomers": The comonomers listed in the present invention and the '709 reference are similar (primarily fluorinated), while there is no overlap between the monomers of the '109 reference and the '709 reference or the present invention. Again, this is no surprise given the complex nature of fluoropolymer polymerizations.
- b) "one of ordinary skill in the art would have found it obvious to modify Blasie's polymerization process in the course of making PVDF copolymers by replacing the traditional surfactant with sulfo-polyester stabilizer as taught by Sharma.
  - 1) "one ... in the art" does not apply in the present case, as the art of fluoropolymers ('709 and present invention), and the art of common ethylenically unsaturated monomers ('109) are not the same art, as stated above. That is why there is no overlap of listed monomers or comonomers.


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- 2) "Blasie's polymerization process" requires high levels of flourosurfactants, unlike the less than 300 ppm required by Applicant. On the other hand Applicant requires the presence of surface active agent - unlike the absence of surface active agent taught by the '109 reference. The Blasie reference teaches a level of surface active agent at least double that claimed by Applicant, while the '709 reference is at zero.

Since the cited reference fails to present a *prima facie* case of obviousness over the claims as amended, Applicant believes that the reasons for rejection have been overcome, and the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,

  
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